application, and the specification has been amended accordingly. FIG. 1 illustrates the method discussed at page 38, lines 11-22. Note that step 130 in FIG. 1 illustrates the detailed description of various factors that affect the value of a bandwidth securitization instrument discussed from page 39, line 1 to page 41, line 3. FIG. 2 illustrates the method discussed at page 44, line 17 to page 45, line 9. Thus, no new matter is included in FIGS 1 and 2. Applicant respectfully submits that the subject matter recited in the pending claims is now shown in the drawings.

The disclosure is objected to because of an informality in an equation on page 41.

Applicant thanks the Examiner for the helpful comment and the specification has been amended to correct the typographical error.

Claims 3-6 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner states that it is not clear what is meant by the phrase "a bandwidth securitization instrument." Applicant respectfully traverses this rejection.

In particular, page 38 as originally filed explains that:

[i]t is an object of this invention to create a trading instrument which will break bandwidth resources in discrete, usable component pieces, and allow an electronic market system to set a price for this scarce commodity which sets an equilibrium level of supply and demand.

(page 38, lines 13-16). The various factor used to assign a value to the bandwidth securitization instrument are explained in detail at, for example, pages 39-41. Other portions of the specification as originally filed also disclose, for example, how "[f]urther means for computing bandwidth securitization instruments take into consideration probability of failure to exercise an instrument, the time period for which said instrument is valid, intrinsic value relative to

minimum standard bandwidth utilization for the line in question" (page 55, lines 13-16) (emphasis added).

Applicant respectfully asserts that claims 3-6 make it clear that a "bandwidth securitization instrument" represents one of a plurality of component bandwidth resource units comprising a total bandwidth resource.

Claims 3-6 and 16-22 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Applicant also respectfully traverses this rejection.

In particular, with respect to claim 3, the Examiner states that the original specification's disclosure does not describe the step of "receiving at a computer system a value associated with the first component bandwidth resource unit." As described at page 38, lines 13-16, the specification discloses that an "electronic market system" sets a price for a trading instrument. The specification further describes that the price is set, for example, based on a number of values associated with a component unit of bandwidth resource represented by the trading instrument. For example, an intrinsic value (page 39), a percentage chance of failure (page 39), a convenience premium (page 40) and a time value (page 40) are values associated with a bandwidth resource unit. These values are used by the electronic market system to calculate the value of the trading instrument (page 41). Thus, the specification discloses that the electronic market system, or "computer system," receives such values.

The Examiner also states that the step of "assigning a value to the bandwidth securitization instrument without human intervention, based on the received value associated

with the first component bandwidth resource unit" is not described. As explained above, the specification discloses a number of different values associated with a component bandwidth resource may be used to assign a value to the trading, or "bandwidth securitization," instrument. As this step is disclosed as being performed by an "electronic market system" (page 38, line 15), the step is not performed with human intervention. This can be further illustrated by the way the present invention was distinguished, for example, from the NASDAQ system in which human intervention, i.e. traders that enter buy and sell transactions into a centralized system, results in "[m]any errors [being] introduced" (page 34, lines 6-17). Moreover, Applicant notes that the disclosure of U.S. Patent Application 5,428,606, including the automated digital information commodities exchange, is incorporated by reference in the present application.

With respect to claim 4, the Examiner states that the original specification's disclosure does not describe the step of "receiving at a computer system instructions to transfer the bandwidth securitization instrument from a first party to a second party." The Examiner further states that the step of "transferring the bandwidth securitization instrument from a first party to a second party without human intervention" is not described. The specification describes how sellers and buyers transmit instructions to a central "exchange," which then executes a transfer in response to the instructions (page 44, line 16 to page 45, line 9). Applicant again notes that the disclosure of U.S. Patent Application 5,428,606, including the automated digital information commodities exchange, is incorporated by reference in the present application.

With respect to claim 5, the Examiner states that the original specification's disclosure does not describe the step of "estimating a demand at a given moment in time for the first component bandwidth resource unit." The Examiner's attention is directed to page 41, lines 16-

19, which states that "a method is needed to allocate supply based on demand" and to page 55, which states that "estimated demand for said resources at a given time" (lines 9-10) may be used when pricing a bandwidth securitization instrument (lines 2-7).

The Examiner also states that the step of "assigning a value to the bandwidth securitization instrument without human intervention, based on the estimated demand for the first component bandwidth resource unit" is not described. As explained above with respect to claim 3, Applicant respectfully traverses this rejection.

With respect to claim 6, the Examiner states that the original specification's disclosure does not describe the step of "receiving a minimum standard price associated with the first component bandwidth unit." The Examiner's attention is respectfully directed to page 39, lines 1-12, which describe how a "minimal standard telecommunications cost" may be used to determine an intrinsic value for a component bandwidth unit.

The Examiner further states that the step of "estimating a convenience premium for the bandwidth security instrument with respect to the minimum standard price" is not disclosed. The Examiner's attention is respectfully directed to page 30, lines 4-14, which disclose an amount a party is willing to pay above a minimum value, or a "convenience premium."

The Examiner also states that the step of "assigning a value to the bandwidth securitization instrument, without human intervention" is not described in the specification as originally filed. As described above with respect to claim 3, Applicant asserts that such a step is fully disclosed in the originally filed specification. However, claim 6 has been amended to recite that the step of assigning is performed "at an electronic market system" as opposed to "without

human intervention" to conform the language of the claim with the language used, for example, at page 38, lines 14-16.

The subject matter of claims 16 and 18 are similarly described in the specification as explained above.

Claims 3-6, 16-20 and 22 stand rejected under 35 U.S.C. § 102 as being anticipated by the NASDAQ market described on pages 32-38. Applicant respectfully submits that this reference fails to suggest a "bandwidth securitization instrument" as recited in the rejected claims. Thus, these claims are allowable over the cited reference. This distinction will be further described in the following section.

## The Claims Distinguish Over the Cited Reference

Claims 3-6 are directed to methods of assigning a value to a bandwidth securitization instrument. As amended, each of these claims recite the steps of "dividing a total bandwidth resource into a plurality of component bandwidth resource units," "representing a first component bandwidth resource unit with the bandwidth securitization instrument." Moreover, claims 3, 5 and 6 further recite the step of "assigning a value to the bandwidth securitization instrument" and claim 4 further recites the step of "transferring the bandwidth securitization instrument."

The NASDAQ system is directed to an exchange that trades in a finite number of stock certificates or security "instrument." Each available instrument represents the value of, for example, a publicly traded corporation.

In contrast, the present invention is directed to an instrument that represents a component unit of a total bandwidth resource. Typically, the value of a unit of a total bandwidth resource is set a fixed value per unit time or per bit, such as \$19.99 per month of Internet access. The value of larger units of a total bandwidth resource are individually negotiated between a network provider and, for example, a corporation.

According to an embodiment of the present invention, a bandwidth securitization instrument is created such that the instrument can be assigned a value and/or traded between parties. Nothing in the NASDAQ system discloses or suggests such an approach to bandwidth resources, including the steps of "dividing a total bandwidth resource into a plurality of component bandwidth resource units," "representing a first component bandwidth resource unit with the bandwidth securitization instrument," "assigning a value to the bandwidth securitization instrument" and "transferring the bandwidth securitization instrument" as recited in claims 3-6.

Moreover, because the NASDAQ system is not directed to bandwidth resources, the reference completely fails to suggest the multiple steps recited in claim 6, including the use of a "probability of failure," an "exercise period" and a "convenience premium" to assign a value to a bandwidth securitization instrument.

Because claims 3-6 distinguish over the prior art, claims 16-22, which depend from claims 3-6, are also allowable.

In view of the above comments, it is respectfully submitted that the cited reference does not anticipate the invention as defined by independent claims 3-6. Nor does the reference anticipate claims 16-22 dependent thereon. Further remarks regarding the asserted relationship between any of the claims and the cited references is not necessary, in view of their allowability.

Applicant's silence as to the Examiner's comments is not indicative of an acquiescence to the

stated grounds of rejection.

**Conclusions** 

In view of the comments and amendments submitted above, Applicant respectfully

asserts that the claims clearly and patentably define the invention and that all of the pending

claims are allowable. Applicant thus requests reconsideration and withdrawal of all outstanding

objections and rejections.

The Examiner is invited to contact the undersigned at (202) 775-2896 to discuss any

matter concerning this application. The Office is hereby authorized to charge any additional fees

or to credit any overpayments to Deposit Account No. 11-0600.

Respectfully submitted,

Dated: December 30, 1998

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